

Claims

1. Device for continuous drying of a paper pulp web, with a drying drum and an air circulating system, wherein the improvement comprises that
5 the drying drum has a shell including a perforated cylinder that is supported by a plurality of radial bearing rings.

2. Device according to claim 1, wherein the perforations are in the form of holes.

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3. Device according to claim 1, wherein the plurality of radial bearing rings includes at least three rings welded to the cylinder and the shell includes longitudinal ribs along the axial direction the cylinder.

15 4. Device according to claim 3, wherein the longitudinal ribs are arranged at a distance of 40 to 80 mm from one another.

5. Device according to claim 3, wherein the longitudinal ribs are welded to the radial bearing rings, as well as to the perforated cylinder.

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6. Device according to claim 3, wherein adjacent the edges of the cylinder the longitudinal ribs are welded to the outermost radial bearing ring without connection to the cylinder, and the outermost radial bearing ring is not connected to the cylinder.

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7. Device according to claim 1, wherein the drum has axial end covers and an annular flange inside each cover, and wherein a circumferential ring is secured to each of the outermost radial bearing rings and extends from the flange inwardly to the edge of the paper web when drying on the drum.

8. Device according to claim 7, wherein the circumferential ring has a pattern of perforations.

9. Device according to claim 1, comprising end covers screwed to the shell, at each axial end of cylinder.

10. Device according to claim 1, wherein all the fixed connections in the shell, are welded only.

11. Apparatus having a drum, axle means along the drum centerline for supporting the weight of the drum, journal means associated with the drum and the axle, a motor for imparting a rotational torque to the drum, and a hot air supply for delivering a flow of hot air to the drum for drying a paper pulp sheet or web carried on a circumferential portion of the drum as the drum rotates, wherein the improvement comprises that the drum has means for rigidly supporting a perforated cylinder relative to the journal means, and an outer shell including the perforated cylinder and a plurality of bearing rings fixed to the exterior of the cylinder.

12. Apparatus according to claim 11, wherein the drum includes axially spaced apart end covers that are rigidly connected to the journal means, and said means for rigidly supporting the cylinder relative to the journal means includes said end covers.

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13. Apparatus according to claim 12, wherein said means for rigidly supporting the cylinder relative to the journal means includes an annular flange bolted on each of said covers, said flanges facing each other and respectively rigidly supporting said cylinder.

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14. Apparatus according to claim 13, wherein the outer shell includes a plurality of axially extending ribs that are rigidly connected to the radial bearing rings, thereby forming a multiplicity of pockets around the perforated cylinder.

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15. Apparatus according to claim 14, wherein the bearing rings closest to the covers are rigidly connected to the axial ribs but not rigidly connected to the cylinder.

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16. Apparatus according to claim 15, wherein the drum includes spaced apart, perforated circumferential rings respectively extending axially from the flanges to at least said bearing rings closest to the covers.

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17. Apparatus according to claim 16, wherein the cylinder is perforated uniformly along a central axial region and is not perforated at axial end regions, and wherein at least some perforations on the circumferential rings radially overlap some of the perforations in the central axial region.

18. Apparatus according to claim 13, wherein the axial ends of said shell are closed off by the annular flanges.

19. Apparatus according to claim 11, wherein the shell includes at
5 least three bearing rings welded to the cylinder and an annular flange welded to each axial end of the cylinder, said flange being included in said means for rigidly supporting the perforated cylinder.

20. Apparatus according to claim 19, wherein the outer shell
10 includes a plurality of axially extending ribs that are rigidly connected to the radial bearing rings, thereby forming a multiplicity of pockets around the perforated cylinder.